



United States Department of the Interior

FISH AND WILDLIFE SERVICE

300 Westgate Center Drive
Hadley, MA 01035-9589



In Reply Refer To:
FWS/Region 5/009604

NOV 27 2002

Senior Counselor Branden Blum
National Oceanic and Atmospheric Administration
U.S. Department of Commerce
1305 East-West Highway
Silver Spring, Maryland 20910

Dear Mr. Blum:

Thank you for your September 26, 2002, letter to Director Steven Williams regarding the opportunity to provide you with comments for your evaluation of an appeal of a New York State Department of State (NYSDOS) decision to deny Coastal Zone Management Act (CZMA) section 307(c)(3)(A) consistency for the proposed U.S. Army Corps of Engineers (Corps) authorization of a permit for a proposed crossing of the Hudson River at Haverstraw Bay (Crossing), a State-designated significant coastal habitat and a National Marine Fisheries Service (NMFS)-designated Essential Fish Habitat area. Director Steven Williams has asked us to respond.

Our comments are with respect to CZMA objectives (1) through (3). We believe that our input will be most helpful with respect to CZMA objective (2), which requires an evaluation of whether the adverse effects of the proposed activity outweigh its contribution to the national interest, when those effects are considered separately or cumulatively. While NYSDOS looked at many issues during their review, our comments only address potential impacts to fish and wildlife resources.

The U.S. Fish and Wildlife Service (FWS) has recommended denial of the Crossing's Corps permit. This recommendation is based on our evaluation of the Crossing's probable impacts to fish, wildlife, and their habitats, including cumulative impacts as defined under the National Environmental Policy Act and the Clean Water Act.

Our evaluation considers the balance between the benefits and reasonably foreseeable detriments of the proposed activity on the public interest. We believe that the Crossing will contribute directly to the degradation of important fish and wildlife habitats and may lead to increased secondary impacts associated with the construction of laterals and compressor stations. The public benefits of an additional pipeline do not exceed public losses with respect to public trust resources, including fish, wildlife, and their habitats. For additional information, please see the enclosed materials: the FWS's responses to the Supplemental Draft Environmental Impact

Statement (Draft EIS) and the Final Environmental Impact Statement (Final EIS), and a March 5, 2002, letter to the Corps summarizing the FWS's concerns about the proposed Crossing.

Summary of Resources at Crossing Site

The Crossing proposes to cross the Hudson River at Haverstraw Bay, which is classified as a Significant Coastal Habitat Complex (USFWS 1997) and provides habitat for the federally listed, endangered shortnose sturgeon (*Acipenser brevirostrum*). Haverstraw Bay provides habitat for a variety of fish species such as striped bass (*Morone saxatilis*), American eel (*Anguila rostrata*), Atlantic tomcod (*Microgadus tomcod*), American shad (*Alosa sapidissima*), and blueback herring (*Alosa aestivalis*). Haverstraw Bay also provides important wintering habitat for bird species such as black duck (*Anas rubripes*), Canada goose (*Branta canadensis*), canvasback (*Aythya valisneria*), and the federally listed, threatened bald eagle (*Haliaeetus leucocephalus*). As previously stated, Haverstraw Bay is a State-designated significant coastal habitat and a NMFS-designated Essential Fish Habitat area.

Adverse Effects to Coastal Resources

Temporary impacts during construction, i.e., increases in turbidity, direct mortality of benthic organisms, and potential resuspension of contaminated sediments, were documented in the Crossing's Final EIS. Other potential impacts, such as those resulting from pipeline leaks or ruptures, were not evaluated in the Final EIS. A literature review of pipeline failures and releases is summarized by S.A. Patin (1999). The majority of the research and testing related to underwater pipeline failures and natural gas releases has been done in marine systems.

In addition to direct mortality of fish and aquatic species resulting from any pipeline failure, methane gas releases have been shown to have toxic effects on aquatic organisms. Medium to heavy methane intoxication affects the nervous and cardiovascular systems in fish and can result in leukocytosis and irreversible damage to the cerebrum and heart tissue.

Data collected after accidental gas blowouts in the Sea of Asov in 1982 and 1985 showed elevated methane levels detected in the water column at least 500 meters from the pipeline. The data also indicated that fish suffered abnormalities indicative of acute poisoning. These abnormalities included impaired coordination, pathologies of organs and tissues, and modifications of protein synthesis. These symptoms were similar to anomalies found in test fish kept for 4 to 5 days in cages near the blowout site (Patin 1999).

The Millennium Pipeline Company (Millennium) has indicated that any gas released in Haverstraw Bay would bubble to the surface and quickly dissipate. The FWS agrees that methane is relatively insoluble in water compared to other gases such as carbon dioxide and oxygen, but a pipeline leak would still allow a significant volume of gas to enter the water column. For example, the Crossing at maximum operating pressures (1,000 pounds per square inch) with 34,200 cubic feet of gas is equivalent to 2.3 million cubic feet of gas at standard atmospheric pressure. Although Millennium has argued that they would immediately detect a leak and shut down the pipeline at the nearest valve, response times would likely be significantly longer than for leaks in more accessible areas.

The Final EIS documented relatively low incidences of pipeline failure, and the FWS believes that there is significant risk of undetected failure in Haverstraw Bay. The monitoring of the condition of the pipeline is conducted less frequently in undeveloped areas relative to residential areas, which may reduce the likelihood of detecting damage to the pipe caused by anchor drag, corrosion, or other forces.

The Final EIS did not evaluate the above information and therefore, did not fully state the potential impacts to Haverstraw Bay that would result from a significant leak or rupture. The FWS has requested that Millennium and the Federal Energy Regulatory Commission (FERC) assess the potential impacts resulting from a "worst case" accident in Haverstraw Bay.

If a crossing of the Hudson River is deemed necessary by the permitting agencies, the FWS has already requested in response to the Draft EIS and the Final EIS, that the Corps and the FERC evaluate and quantify the impacts of the Hudson North and Tappan Zee alternatives on wetlands, waterbodies, and terrestrial habitat. This data, comparing all of the alternatives, is needed to determine which route would be the least environmentally damaging, practicable alternative as required by the Clean Water Act.

Summary

The FWS maintains our recommendations to the Corps to deny a permit, and for the NYSDOS's denial of coastal zone consistency be upheld for this Crossing due to unacceptable impacts to aquatic resources of national importance. Haverstraw Bay has been recognized as an important natural resource by NMFS, the FWS, and the State of New York.

Significant temporary impacts to Haverstraw Bay are associated with the construction of this Crossing, as well as the possibility of pipeline failure. Given the significance of the resource to be impacted and the numerous alternatives available (newly constructed and proposed pipelines, and alternative routes), we recommend that the Secretary of Commerce maintain the NYSDOS's denial of coastal zone consistency for the Crossing.

For further information, please contact Mr. David Stilwell, Supervisor, New York Field Office, at 607-753-9334.

Sincerely,

A handwritten signature in black ink, appearing to read "MAMIE A. PARKER", with a stylized flourish at the end.

Dr. Mamie A. Parker
Regional Director

Enclosures

Senior Counselor Branden Blum

Literature Cited:

Patin, S.A. 1999. Environmental Impact of the Offshore Oil and Gas Industry. Ecomonitor Publishing. East Northport, New York.

USFWS. 1997. Significant Habitats and Habitat Complexes of the New York Bight Watershed. U.S. Department of the Interior, Fish and Wildlife Service, Southern New England - New York Bight Coastal Ecosystems Program, Charlestown, Rhode Island.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

3817 Luker Road
Cortland, NY 13045



March 5, 2002

Colonel John B. O'Dowd
District Engineer, New York District
U.S. Army Corps of Engineers
26 Federal Plaza
New York, NY 10278-0090

Attention: Ms. Heidi Firstencel, Troy, New York

Dear Colonel O'Dowd:

The following comments represent the position of the U.S. Fish and Wildlife Service (Service) on the Millennium Pipeline Project as discussed during the February 13, 2002, meeting with the U.S. Army Corps of Engineers (Corps), Federal Energy Regulatory Commission (FERC), and National Marine Fisheries Service (NMFS). The Project would include construction of approximately 424 miles of 24- and 36-inch diameter pipeline and associated above-ground facilities extending from the U.S.-Canadian border in Lake Erie to Mount Vernon, Westchester County, New York.

In letters dated April 28, 2000, and May 23, 2000, the Service recommended that the Corps deny Millennium's Section 404 permit because the project would result in substantial and unacceptable effects to aquatic resources of National importance, as defined in paragraph one, Part IV, of the 1992 Memorandum of Agreement between the Department of the Interior and the Department of the Army regarding Section 404(q) of the Clean Water Act. The Service, after reviewing the Supplemental Draft Environmental Impact Statement (SDEIS) and the Final Environmental Impact Statement (FEIS), maintains this recommendation for the reasons described below.

Lake Erie

In our response to the SDEIS and the FEIS dated April 27, 2001, and November 7, 2001, we recommended that the Lake Erie crossing be avoided if another feasible alternative with fewer environmental impacts was available. The proposed project may increase turbidity and sedimentation, disrupt fish migration in Lake Erie during construction, potentially disrupt benthic fauna, and cause mortality to aquatic species in the event of leaks or pipeline rupture.

There is a limited amount of information on the specific effects of leaks and pipeline failure on aquatic organisms. Most of the research and testing has been done in marine systems and a literature review has been summarized in Patin (1999). Fish and aquatic invertebrate mortality could result from pipeline failure. In addition to direct mortality resulting from a rupture,

methane has been shown to have some toxic effects on aquatic organisms. Medium to heavy methane intoxication affects the nervous and cardiovascular system in fish and can result in irreversible damage to the cerebrum and heart tissue and leukocytosis. Millennium has indicated that any gas released in Lake Erie would bubble to the surface and quickly dissipate. We agree that methane is relatively insoluble in water compared to gases such as carbon dioxide and oxygen, but data collected after accidental gas blowouts in the Sea of Asov in 1982 and 1985 indicated that fish suffered abnormalities indicative of acute poisoning such as impaired coordination, pathologies of organs and tissues, and modifications of protein synthesis that were similar to anomalies found in test fish kept for 4 to 5 days in cages near the blowout site (Patin 1999). Elevated methane levels were detected in the water column at least 500 meters from the blowout area. In laboratory tests avoidance effects were observed at methane concentrations between 0.1 and 0.5 milligrams/liter (mg/l) and fish mortality between 1 and 3 mg/l. The FEIS did not cite any of the above information and did not fully state the potential impacts to Lake Erie that would result from a significant leak or rupture.

The FEIS presents the rates of failures for 300,000 miles of natural gas pipeline and these rates of failure are relatively low. The risk of failure in Lake Erie may be greater than average because that portion of the pipeline under the lake would only be inspected every 3 years as opposed to annual inspections in populated areas. Response times to repair leaks or ruptures would be considerably longer than to repair terrestrial leaks or ruptures. Because the depth that the pipeline would be buried was determined by the 100-year ice scour depth, there is a 20% chance that the pipeline would be damaged at some point during its 20-year life. Millennium is relying on natural processes to backfill the trench; the pipeline would not be fully protected until the trench is filled. The FEIS states that much of the backfilling will have occurred by the spring following construction, but also states that ice scour scars (which bear some resemblance to the proposed pipeline trench) persist for decades. Therefore, it is likely that at least portions of the trench will not fill in quickly and the pipeline may be vulnerable to scour for some longer period of time.

The impacts to aquatic organisms from leaks or ruptures in Lake Erie could vary considerably with location, depth, time of year, water temperature, and dissolved oxygen. We request that the FERC and the Corps assess the impacts of a "worst case" scenario with respect to the volume of gas released, manner of release (rupture versus leakage), and repair response time. Given the potential impacts, we repeat our request for wetland and waterbody impact assessments of alternatives described in the FEIS that bypass Lake Erie to determine if the Lake Erie crossing is the least environmentally damaging practicable alternative.

If the Lake Erie crossing is permitted, we recommend additional measures to reduce impacts. Millennium states that recovering drilling fluids released during the directional drill of the nearshore area is unnecessary. The FEIS says the resulting bentonite plume could cover several square miles. The Service believes that the release of drilling muds into Lake Erie should be avoided and that Millennium should be required to recapture drilling muds before they are released into the water column.

Hudson River

The Millennium Pipeline is proposed to cross the Hudson River at Haverstraw Bay. Haverstraw Bay is classified as a Significant Coastal Habitat Complex (USFWS 1997) and provides habitat for the Federally-listed endangered shortnose sturgeon (*Acipenser brevirostrum*). The Bay provides habitat for a variety of fish species such as striped bass (*Morone saxatilis*), American eel (*Anguila rostrata*), Atlantic tomcod (*Microgadus tomcod*), American shad (*Alosa sapidissima*), and blueback herring (*Alsea aestivalis*). The Bay also provides important wintering habitat for bird species such as black duck (*Anas rubripes*), Canada goose (*Branta canadensis*), canvasback (*Aythya valisneria*), and the Federally-listed threatened bald eagle (*Haliaeetus leucocephalus*).

In addition to the temporary impacts resulting during construction that were documented in the FEIS, other potential impacts could result from pipeline leaks or ruptures. Negative effects to aquatic organisms may be similar to those described above for Lake Erie. Although the response time for repair crews would likely be faster as the Bay is narrower and shallower than Lake Erie and ice is less likely to impair repair efforts, the concentrations of aquatic resources is likely to be much higher and greater numbers of organisms could be affected by comparable accidents. The Service recommends that the Corps and FERC assess the potential impacts resulting from a "worst case" pipeline accident in Haverstraw Bay.

The Service believes that the proposed crossing at Haverstraw Bay should be avoided and an alternative with fewer impacts selected. We maintain that a "one pipe" alternative to the Eastchester pipeline and the portion of the Millennium pipeline east of the Hudson River should be developed to deliver the necessary gas volumes to New York City markets and reduce environmental impacts. If a crossing of the Hudson River is necessary, the Service repeats our request written in response to the SDEIS and the FEIS, that the Corps and the FERC evaluate the wetland impacts of the Hudson North and Tappan Zee alternatives and determine which route would be the least environmentally damaging practicable alternative.

Threatened and Endangered Species

The Service has made a "not likely to adversely affect" determination for five of the six Federally-listed species under our jurisdiction. These include bald eagle (*Haliaeetus leucocephalus*), northern riffleshell (*Epioblasma torulosa*), clubshell (*Pleurobema clava*), dwarf wedge mussel (*Alismodonta heterodon*), and northern wild monkshood (*Aconitum noveboracense*). The Service has not issued a "not likely to adversely affect" determination for the Federally-listed threatened bog turtle (*Clemmys muhlenbergii*). In letters dated March 20 and July 17, 2001, written in response to the Biological Assessment (BA) and supplemental survey results, and in our responses to the SDEIS and the FEIS, the Service has requested updated alignment sheets that indicate that the Millennium Pipeline Project will avoid impacts to Wetland 9 (as designated in the BA), which contains habitat that may be suitable for the Federally-listed bog turtle.

Wetland Mitigation

Millennium has submitted a wetland mitigation plan that includes the purchase of wetlands in Orange County and Cattaraugus County, New York. Under the plan, Millennium would purchase 495 acres in Cattaraugus County (approximately 190 acres of forested wetland, 2 acres of forested/scrub-shrub wetland, 26 acres of emergent wetland, 2 acres of open water, and 276 acres of upland habitat) and 197 acres in Orange County (approximately 161 acres of forested wetland, 27 acres of emergent/forested wetland, and 9 acres of emergent wetland). Millennium proposes to transfer ownership of the property to New York State for management under their public lands program. This plan is unlikely to completely replace the functions and values of the forested wetlands impacted by the project without a restoration component. Forested wetlands impacted by the project would be cleared, graded, ditched, and backfilled during construction. Ultimately they would revert to emergent or scrub-shrub wetlands subject to periodic mowing and woody vegetation control. Because the project would result in a loss of forested wetland habitat, the Service recommends that the proposed mitigation plan be modified to include some restoration of forested wetlands. The acreage of restoration we would request would be at least equal to the acres of forested wetland permanently converted by the proposed project. During the February 13, 2002, conference call, Heidi Firstencel indicated that there may be opportunities to restore wetlands in the Orange County parcel as many of the areas mapped as wetland on the National Wetlands Inventory maps appeared to have been converted to uplands by the surrounding agricultural activity.

The Service generally considers preservation as part of a mitigation package that includes wetland restoration and creation and then considers whether the areas proposed for preservation provide wetland functions that are regionally important and similar to the functions that would be impacted by the project, are under threat of development, and/or are isolated wetlands that are not under the regulatory jurisdiction of the Clean Water Act.

Blasting

Millennium has recently stated that approximately 200 feet of the Haverstraw Bay crossing would require blasting. The Service acknowledges that the proposed mitigation measures would reduce the potential negative impacts, but believes that additional measures are warranted. Specifically, the Service recommends that Millennium assess the possibility of installing portable cofferdams and pumping the water from the area to be trenched, removing and stockpiling unconsolidated materials, and using a rocsaw to dig the trench. After installation, the trench should be backfilled with the stockpiled sediment and the cofferdams removed.

Summary

Based on the potential for significant and unacceptable impacts to aquatic resources of National importance resulting from the Millennium Pipeline, the Service maintains our objection to the proposed project. We would reconsider our position if:

1. The FERC and the Corps evaluate the wetland and waterbody impacts associated with alternatives that would avoid the Lake Erie crossing to determine whether the proposed route is the least environmentally damaging practicable alternative. This assessment should include a

"worst case" scenario assessment of potential acute and chronic impacts to aquatic resources resulting from pipeline leakage and rupture in Lake Erie.

2. If the Lake Erie crossing is permitted, Millennium should recapture drill muds from the shoreline directional drilling before they are released into the Lake Erie water column and employ mitigation measures such as bubble curtains and noise makers to encourage fish to move out of areas where blasting is necessary.
3. The FERC and the Corps evaluate the need for both the Millennium and Eastchester Pipelines to serve the New York City market and if the Millennium Pipeline is deemed necessary, whether one of the project alternatives would result in a reduction of impacts to wetlands and waterbodies relative to those associated with the Haverstraw Bay crossing. This assessment should include a "worst case" scenario assessment of potential impacts to the Hudson River resulting from pipeline leakage and rupture.
4. Millennium should provide updated alignment sheets that indicate that the project will avoid bog turtle habitat in Wetland 9, as described in the BA.
5. The Corps and Millennium identify opportunities for forested wetland restoration and confirm that the New York State Department of Environmental Conservation is willing to take possession and manage both sites.
6. If the Haverstraw Bay crossing is permitted, Millennium should avoid blasting in Haverstraw Bay and instead do the blasting "in the dry" as described above.

If you have any questions regarding this letter, please contact Alex Chmielewski of the New York Field Office at (607) 753-9334.

Sincerely

A handwritten signature in dark ink, appearing to read "David A. Stilwell". The signature is fluid and cursive, with the first name "David" and last name "Stilwell" clearly distinguishable.

David A. Stilwell
Field Supervisor

Literature Cited:

- Patin, S.A. 1999. Environmental Impact of the Offshore Oil and Gas Industry. Ecomonitor Publishing. East Northport, New York**
- USFWS. 1997. Significant Habitats and Habitat Complexes of the New York Bight Watershed. U.S. Department of the Interior, Fish and Wildlife Service, Southern New England - New York Bight Coastal Ecosystems Program, Charlestown, Rhode Island.**
- cc: NYSDEC, Albany, NY (Endangered Species Unit, Attn. P. Nye)
NYSDOS, Albany, NY (Attn. S. Resler)
NMFS, Highlands, NJ (Attn. S. Gorski)
NMFS, Milford, CT (Attn. M. Ludwig)
USACE, Auburn, NY (Attn. M. Crawford)
USACE, Pittsburgh, PA (Attn. S. Hans)
EPA, Chief, Water Programs Division, New York, NY**
- AChmielewski; Biologist File
Project, BR & Weekly Files
ES:NYFO:AChmielewski:ac:mlp**



United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 LUKER ROAD
CORTLAND, NY 13045

October 29, 2001

Memorandum

To: Team Leader, Natural Resources Management, OEPC, Washington, DC

From: Field Supervisor, New York Field Office, Region 5, Cortland, NY

Subject: Millennium Pipeline Project: Final Environmental Impact Statement (ER-01/161)

The U.S. Fish and Wildlife Service (Service) has reviewed the Final Environmental Impact Statement (FEIS) dated October 2001, prepared by the Federal Energy Regulatory Commission (FERC) for the Millennium Pipeline Project and recommends submitting the following comments to the Federal Energy Regulatory Commission (FERC).

PROJECT DESCRIPTION

The project includes the installation of 373 miles of 36-inch diameter pipe and 44 miles of 24-inch diameter pipe beginning at an interconnection with TransCanada Pipelines Ltd. (TransCanada) in Lake Erie near the U.S./Canada border and referred to hereafter as the Millennium Project. The pipeline would make landfall near the Town of Ripley, Chautauqua County, New York, and extend across the southern tier of New York to its terminus in Mount Vernon, Westchester County, New York. Facilities associated with the Millennium Project include measurement facilities, compressor stations, valve stations, and cathodic protection rectifier beds.

The project would impact approximately 670 wetlands (414 acres), 199 intermittent waterbodies, and 308 perennial waterbodies, including Lake Erie and the Hudson River (it should be noted that the U.S. Army Corps of Engineers (Corps) has not completed their jurisdictional determination of the Millennium Project and these values are approximate). The project would impact approximately 2,222 acres of open land, 1,488 acres of forest land, 1,018 acres of agricultural land, 863 acres of open water, and 363 acres of residential and commercial lands.

THREATENED AND ENDANGERED SPECIES ISSUES

The Service has issued a "no effect" determination for northern wild monkshood (*Aconium noveboracense*), and a "not likely to adversely affect" determination for bald eagle (*Haliaeetus leucocephalus*), clubshell (*Pleurobema clava*), dwarf wedge mussel (*Alasmidonta heterodon*), and northern riffleshell (*Epioblasma torulosa*). The Service has not made a final determination for bog turtle (*Clemmys muhlenbergii*) pending additional information that Millennium will be

providing. If project plans change, or additional information on Federally-listed species becomes available, this determination may be reconsidered.

FERC ALTERNATIVES ANALYSIS

The Service generally recommends alternatives that use existing facilities to the maximum extent practicable to reduce environmental impacts. Looping and the use of additional compression are two ways to use existing systems to transport gas safely, while reducing the need for new pipeline construction and clearing of additional rights-of-way (ROW).

Several alternatives using existing facilities with expanded capacity through looping and additional compression were rejected by the FERC because the estimated costs were in excess of the proposed Millennium Project. However, these cost estimates do not appear to include the cost of construction of facilities in Canada. These costs will likely be recovered from U.S. customers and should be included in the analysis. For example, the FEIS (page 3-12) states that the worst case Texas Eastern/Algonquin Alternative would cost approximately \$883,432,000 to construct while the Millennium Project would cost \$683,600,000 (not including the Millennium Canada project). If the \$226,000,000 cost of the Millennium Canada Project is factored in, the Texas East/Algonquin Alternative is \$26,200,000 dollars cheaper than the Millennium Project; not \$148,832,000 more expensive as stated in the FEIS. Because the Texas Eastern/Algonquin Alternative largely uses existing facilities, and, therefore, may have fewer environmental impacts, the Service believes it is a viable alternative to the proposed Millennium Project.

The cost and impacts associated with the Texas Eastern/Algonquin Alternative may be less than estimated by the FERC because of changes in the estimated demand for Millennium's gas volumes. Recent filings have indicated that the contract with IBM, which necessitated the construction of a lateral, appears to have expired, and Consolidated Edison Company of New York, Inc., (Con Ed) has stated that they do not have the capacity to distribute Millennium's gas volumes downstream of the Mount Vernon Interconnect. The looping and compression estimates stated in the FEIS for the Texas Eastern/Algonquin Alternative assumes that the new system must move approximately 700 million cubic feet per day (MMcf/d). Given the possible reduction in demand and the proposed volumes delivered to the New York City area by the proposed Eastchester Project, less looping and compression may be required and the associated environmental impacts could be reduced.

Lake Erie Crossing Alternatives

The Service is concerned about the impact of the proposed project on the fish and wildlife resources of Lake Erie. The proposed project may increase turbidity and sedimentation, disrupt fish migration in Lake Erie during construction, and potentially disrupt benthic fauna and cause direct mortality to fish and wildlife if there are leaks or pipeline failure. We maintain our view that the Niagara Spur Alternative is a viable option with the potential for fewer environmental impacts for the western portion of the Millennium Project. The alternatives analysis for National Fuel's Niagara Spur Alternative estimated the costs to be \$212,050,000, which was significantly higher than the \$187,393,000 cost of constructing mileposts 0.0 to 117.0 of the Millennium Project. However, the \$226,000,000 cost of constructing the Canadian portion of the Millennium Project was not included. The FEIS did state that their estimate for the Niagara Spur Alternative

did not include the additional costs of constructing Canadian facilities, but stated that the additional construction would "slightly increase" the project costs.

Although the FEIS states that the Niagara Spur Alternative would require more pipeline to be constructed on land and may have more impacts to terrestrial resources, we feel that further investigation is warranted. The looping and compression requirements stated in the FEIS for the Niagara Spur Alternative assume that the new system must move approximately 700 MMcf/d. However, recent information filed with the FERC indicates that there may not be sufficient demand to justify this much capacity (see above comments on the Texas Eastern/Algonquin Alternative). Therefore, less looping and compression may be needed, and the costs and environmental impacts may be less than those associated with the proposed Millennium Project.

Hudson River Crossing

The Millennium Project would cross 2.1 miles of the Hudson River at Haverstraw Bay using an open-cut barge lay method. Haverstraw Bay has been designated as a Significant Habitat of the New York Bight Watershed by the Service and a Hudson River Significant Tidal Habitat by the New York State Department of State. It also is important habitat for the Federally-listed endangered shortnose sturgeon (*Acipenser brevirostrum*). The Service is concerned about decreases in water quality associated with construction that would impact important nursery areas for a variety of fish species.

The FERC has presented additional alternative routes that would cross the Hudson River north of Haverstraw Bay near the Village of Verplanck, Westchester County (Hudson North Alternative), or south of Haverstraw Bay near the Tappan Zee Bridge, Rockland County (Tappan Zee Bridge Alternative). The Hudson North Alternative had been the National Marine Fisheries Service's (NMFS) preferred crossing as many of the resources in the vicinity of the Tappan Zee Bridge are similar to those in Haverstraw Bay. The Service is concerned about minimizing impacts to both the Hudson River and the terrestrial resources in the Hudson River Valley. We requested additional information from the FERC in our response to the Supplemental Draft Environmental Impact Statement dated April 27 and June 3, 2001. We specifically requested that the FERC quantify impacts to environmental resources associated with the two alternative routes. This information was not included in the FEIS and we repeat our request for information on the number, size, and type of waterbodies, wetlands, and forest land that would be impacted by the Hudson North and Tappan Zee Bridge Alternatives.

The FEIS evaluated the potential for a combined system alternative to provide additional capacity to the New York City area. Currently, the FERC is evaluating the potential for the Millennium Project and the Eastchester Project (which would carry gas from Northport, New York, to the Bronx) to meet the anticipated gas demand. It is more environmentally damaging to construct both the Eastchester and the Millennium Projects than a single project. It may be possible to construct a single project that is sized to meet the anticipated demand over the proposed project life. We recommend that the FERC evaluate the costs and benefits associated with a combined system alternative vs. two separate pipelines, taking into account gas transport efficiencies and environmental impacts.

Summary

The FEIS adequately describes many of the impacts associated with the FERC's preferred alternative for the Millennium Project. However, the Service believes that practicable alternatives with fewer environmental impacts exist to transport gas needed over the proposed life of the project to the stated delivery points. The alternatives analysis described in the FEIS eliminated several alternatives with the potential for fewer environmental impacts based on cost estimates that did not appear to include the construction cost of the Canadian portion of the Millennium Project. Also, the demand and ability to deliver Millennium's proposed gas volumes appears to have changed over the course of project development, and this change is likely to affect the amount of compression and looping used in calculating the cost and constructability of several alternatives as described above. We recommend that before the FERC eliminates an alternative that may have fewer environmental impacts than the Millennium Project, the full cost and facility requirements be determined for all alternatives.

Furthermore, we repeat our request for additional information on wetlands, waterbodies, and forest land impacts associated with alternatives to Millennium's proposed Hudson River crossing at Haverstraw Bay. Without this information, an accurate alternatives analysis is not possible.

Finally, we believe that the FERC should develop a one-pipe alternative that would deliver the gas volumes proposed by both the Millennium and Eastchester Projects. A one-pipe alternative would have fewer environmental impacts than having multiple pipelines cross the Hudson River and Long Island Sound with termini within 10 miles of each other.

CORPS OF ENGINEERS IMPACT DETERMINATION

The Corps has not yet completed their jurisdictional determination for wetlands and waterbodies that would be impacted by the Proposed Alternative. Therefore, the acreage and number of impacted sites described in the FEIS are approximate. The Service has requested that the Corps complete its determination so the Service can fully evaluate the project impacts and identify any additional measures that can be taken to avoid and minimize wetland impacts. This will also allow the Service to provide more specific recommendations for mitigation to compensate for any unavoidable wetland impacts. As yet, Millennium has not provided a detailed mitigation plan to compensate for impacts associated with the construction and operation of the project.

The Millennium Project would result in both temporary and long-term impacts to wetlands and waterbodies. Temporary impacts would include removal/disturbance of soil and vegetation during construction. In scrub-shrub or emergent wetlands, these impacts may last five years or more; forested wetlands may take decades to recover from these "temporary" impacts. Long-term impacts include the loss of forested wetlands within the ROW and the regular disturbance of scrub-shrub and emergent wetlands during ROW maintenance.

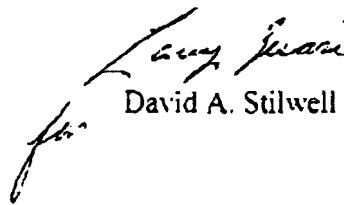
The Service considers the wetland impacts associated with the Millennium Project to be significant. Wildlife species richness in forested and heterogenous wetlands is often high, particularly for large, contiguous wetland areas. The progressive clearing of forested areas will not only reduce the available habitat through clearing, but additional loss of habitat for forest interior species is likely to occur as construction impacts extend into the adjacent forest. These

forest interior species may only maintain a small territory, but it must be within an expansive forest system. Reduction and fragmentation of habitat through clearing and development results in the localized loss of forest interior species.

The Service considers many of the wetlands in the project impact area to be of high value for species under our jurisdiction. The Service's mitigation planning goal for these wetlands is no net loss of in-kind habitat value. Accordingly, unavoidable wetland losses should be mitigated in-kind with at least a 1:1 replacement, with an adequate margin of safety to reflect the expected degree of success of the mitigation plan and the considerable time lag between implementation of the mitigation plan and the maturation of the created forested wetland.

The Buffalo District of the Corps required the following mitigation for temporary and permanent conversion of forested wetlands resulting from the construction and operation of the Empire State Pipeline Project - 1:1 acreage replacement of wooded wetlands, 2:1 acquisition and permanent protection of existing mature wooded wetlands, and various monitoring projects to determine the success of the restoration effort. The Service believes that similar mitigation should be implemented for impacts associated with the Millennium Project. The Service requests the opportunity to review and comment on the mitigation plan.

Please contact Alex Chmielewski at (607) 753-9334 if you have any further questions regarding our comments on this proposed project.



David A. Stilwell

cc: BFA. (ERT). Washington, DC
AChmielewski; Biologist File
Project, BR & Weekly Files
ES:NYFO:AChmielewski:ac:mlp



United States Department of the Interior

FISH AND WILDLIFE SERVICE
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CORTLAND, NY 13045

April 27, 2001

Memorandum

To: Regional Environmental Officer, Boston, MA

From: Field Supervisor, New York Field Office, Cortland, NY

Subject: Supplemental Draft Environmental Impact Statement for the Millennium Pipeline Project, New York (ER-01/161)

In accordance with Mr. Terence Martin's memorandum of March 14, 2001, a suggested response representing the Department of the Interior's comments on the subject document is attached. We received a "no additional comment" from the National Park Service via email on April 3, 2001. Also, we have attached a "cc" list for this project.


David A. Stilwell

Attachments

cc: BFA, (ERT), Washington, DC
NYFO, Project & BR Files
Chmielewski File
ES:NYFO:ACHmielewski:mlp:mvd

"cc" List for the Proposed Millennium Pipeline Project

Columbia Gas Transmission Corp.
Richard Hall
NYS Route 12
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NYSDEC
J. Cooper
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NYSDEC
David VanLuven
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NYSDEC
Peter Nye
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National Park Service
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USFWS
Pennsylvania Field Office
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NMFS
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Mr. David Boergers
Secretary
Federal Energy Regulatory Commission
888 First St., N.E. Room 1A
Washington, D.C. 20426

Dear Mr. Boergers:

The Department of the Interior (Department) has reviewed the Supplemental Draft Environmental Impact Statement (SDEIS) for the Millennium Pipeline Project, New York (Docket No. CP98-150-00 et al.). Part I of the SDEIS addresses the construction of 22.7 miles of 24-inch diameter pipeline in Westchester County, New York. Part II addresses certain issues identified in comments received on the Draft Environmental Impact Statement dated April 16, 1999.

Part I - 9/9A Proposal

The route originally proposed for the Millennium Pipeline followed a transmission corridor operated by Consolidated Edison Company (ConEd). ConEd and the Public Service Commission of the State of New York indicated that this route was undesirable because a pipeline emergency could result in power outages to the New York City area. In response to these concerns, a new route, hereafter referred to as the 9/9A proposal, was developed.

Threatened and Endangered Species Comments

The U.S. Fish and Wildlife Service (Service) has been working with the New York State Department of Environmental Conservation (NYSDEC) and the applicant in regard to Federally-listed threatened and endangered species as well as species of concern that may occur in the vicinity of the project area. The crossing of the Croton River and associated wetlands using a directional drill described in the SDEIS would avoid the likelihood of impacts to Federally-listed species and would be supported by the Service. In a letter to the Federal Energy Regulatory Commission (FERC) dated March 20, 2001, the Service described other measures to reduce and avoid impacts to Federally-listed species and species of concern.

If the crossing of the Croton River is constructed using a directional drill, the 9/9A Proposal would not be likely to adversely affect Federally-listed species under the Service's jurisdiction. Should these measures not be incorporated into the project, a biological assessment, or further consultation pursuant to Section 7 of the Endangered Species Act (87 Stat. 884, as amended: 16 U.S.C. 1531 seq.) will be required with the Service to evaluate potential adverse effects of project implementation on Federally-listed species and their habitat, and to determine if formal consultation is necessary. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered.

There are several remaining issues concerning endangered or threatened species associated with other portions of the Millennium Project, as described in our March 20, 2001, letter to the FERC

Environmental Assessment Comments

The SDEIS describes many of the environmental resources in this 25.4-mile portion of the project area, the potential impacts on these resources that could result from implementation of the selected alternative, and the need for interagency coordination. However, field delineations of the wetlands have not been completed for the 9/9A proposal. The impact analysis in the SDEIS was based on aerial imagery, topographic maps, National Wetlands Inventory Maps (NWI), and limited field investigations. Although NWI maps are useful for identifying the general location of larger wetlands, they may not show the locations of smaller wetland areas. Also, the boundaries of the mapped wetlands may not correspond to the field-delineated boundaries. Therefore, before the FERC can effectively compare the impacts from the originally proposed ConEd route with the Route 9/9A route, detailed field delineations should be performed and wetland boundaries confirmed by the U.S. Army Corps of Engineers (Corps).

The Department supports the measures described in the SDEIS to site the project adjacent to existing rights-of-way (ROWs) and reduce impacts to wetlands and waterbodies to the extent practicable. Additional measures should be taken to further reduce these impacts as described in the Service's April 28, 2000, letter to the Corps, Buffalo District. Specifically, cross-sectional and longitudinal profiles of Class AA, A, B, and C streams should be surveyed prior to construction. This will allow the restoration of pre-construction meander geometry and radius of curvature as well as key streambed features such as the position of the thalweg, bank shape, slope, and position; and depositional bars to be restored, thus reducing the potential for headcutting or downstream scour following construction. During restoration, the native bank and bed material should be replaced.

The Department also recommends modification of the construction window in waterbodies supporting populations of warmwater fish. Species such as largemouth bass (*Micropterus salmoides*) and smallmouth bass (*M. dolomieu*) spawn in the late spring and early summer. Therefore, the Department recommends completing all in-water work in these waterbodies between June 30 and November 30, rather than June 1 to November 30 as proposed in the SDEIS.

Even after all measures have been taken to avoid and minimize impacts, this project would have significant temporary and permanent impacts to forests, wetlands, and waterbodies. Therefore, the Department recommends the applicant develop a detailed mitigation plan that will adequately compensate for these impacts. Impacts should be compensated on a per-watershed basis, to the extent practicable.

Part II - Updated Project Information

The SDEIS includes additional and updated information on several of the major issues associated with the construction and operation of the Millennium Pipeline.

Surface Waters

Millennium has agreed to modify the crossing timing and/or methodology of several streams that support, or are likely to support Federal special concern species or State-listed species. These

species include the bean villosa (*Villosa fabalis*), yellow lamp mussel (*Lampsilis cariosa*), and green floater (*Lasmigona subviridis*), which are considered species of concern (formerly known as Category 2 Candidate species) by the Service and whose status is being monitored throughout much of their range. Species of concern do not receive substantive or procedural protection under the Endangered Species Act; however, the Service does encourage Federal agencies and other appropriate parties to consider this species in the planning process. To avoid potential impacts to these species, Millennium agreed to perform a dry crossing of Cassadaga Creek if water levels are sufficiently low to ensure a successful dry crossing, and establish woody vegetation at the crossing location. At Olean Creek, Millennium will locate any mussel beds from the crossing downstream to the intersection with Route 17, and install silt fence around these beds. At Catatonk Creek, Millennium agreed to relocate any yellow lamp mussels in the construction area to suitable habitat upstream of the crossing. All three of these streams will be crossed between July 1 and November 30 to avoid potential impacts to spawning mussels.

As stated above, the Department recommends additional measures to protect water quality throughout the project area by restoring streams to their pre-construction cross-sectional and longitudinal profiles and replacing the native bed and bank material. The Department also recommends crossing perennial warmwater streams between June 30 and November 30.

Lake Erie

In a letter dated April 28, 2000, the Service recommended avoiding crossing Lake Erie. The potential impacts of constructing and operating a pipeline along the bed of Lake Erie include temporary increases in turbidity and sedimentation, fish movement disruption, fish and wildlife mortality resulting from leaks and the potential release of oily condensate that tends to accumulate in pipelines. The Department recommends identifying an alternative route with fewer environmental impacts than the proposed Lake Erie crossing and requests that the FERC analyze the environmental impacts of alternative routes such as a crossing at Grand Island, Erie County, where pipeline installation using direction drilling has been accomplished, and provide this information in the Final Environmental Impact Statement (FEIS). If the proposed Lake Erie crossing is constructed, the Department concurs with the NYSDEC's recommended construction window of June 1 to November 30.

Hudson River

The SDEIS analyzes several alternatives for crossing the Hudson River. The Service, the National Marine Fisheries Service (NMFS), and the New York State Department of State have expressed concern about the proposed crossing of the Hudson River at Haverstraw Bay, which is described as a Significant Habitat of the New York Bight Watershed (USFWS 1997), a Federally-designated Essential Fish Habitat, and is an important wintering habitat for the Federally-listed shortnose sturgeon (*Acipenser brevirostrum*), which is under the jurisdiction of the NMFS.

Based on information provided in the SDEIS, alternative crossing sites are available. The Hudson River North Alternatives are longer than the proposed route, may require laterals to be constructed to industrial customers, and may have to be routed through or around residential areas, but the Hudson River crossing would be approximately 1-mile long and would avoid the

2.1-mile long crossing through Haverstraw Bay. These alternatives are also sited adjacent to existing ROWs for most of their length. Although the lateral would add to the length of the project, these are small pipelines that could be installed in road shoulders or other areas with minimal environmental impacts. The construction in residential areas could be more complicated, but the SDEIS states that many of these areas are currently under construction and thus already disturbed. Also, the FERC's recommendation of the 9/9A proposal (see Part I of the SDEIS) suggests that construction in residential areas or along roadways is appropriate under certain circumstances.

The Tappan Zee Bridge Alternative would be considerably shorter than the proposed route and would avoid the Haverstraw Bay area, but would impact more residential and commercial land and would have a longer river crossing. The Tappan Zee Bridge Alternative also may require small diameter laterals to industrial customers that may increase the length of the project. As stated above, construction in residential and commercial areas has been recommended by the FERC for other portions of the project and the laterals, if they are constructed, may be installed in areas with minimal environmental impact. Impacts associated with this Alternative's longer river crossing are partially offset by the shorter overall route.

The Department recommends the FERC collect additional data on all the environmental impacts associated with the alternatives and include this information in the FEIS. These data should include at a minimum, the number, type, and acreage of wetlands impacted; forested areas impacted; and the number, water quality classification, and names of all streams crossed by the various alternatives.

Summary Comments

The Service has determined that if the applicant directionally-drills the Croton River and the measures described in the Service's March 20, 2001 letter are implemented, the 9/9A Proposal is not likely to adversely affect Federally-listed threatened or endangered species under Service jurisdiction. There are several remaining issues concerning endangered or threatened species associated with other portions of the Millennium Project, as described in the Service's March 20, 2001, letter to the FERC.

The Department recognizes that the applicant has made an effort to reduce impacts to wetlands and waterbodies and recommends taking additional measures to further reduce impacts, as described above. Additional information on the wetland and waterbody impacts associated with the various alternatives is required before the Department can determine whether the alternatives would impact fewer significant natural resources than the proposed routes.

If you have any questions regarding this memorandum, please contact Alex Chmielewski of the New York Field Office at (607) 753-9334.

Sincerely,

Regional Environmental Officer

Literature Cited.

USFWS. 1997. Significant Habitats and Habitat Complexes of the New York Bight Watershed
U.S. Department of the Interior, Fish and Wildlife Service, Southern New England-
New York Bight Coastal Ecosystems Program, Charlestown, Rhode Island.